

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claim 1 (currently amended): Semiconductor device manufacturing equipment, comprising:

a plurality of interconnected chambers including a load-lock chamber, and at least one process chamber in which a wafer is to be processed, adjacent ones of said chambers having a pair of mutually opposing gate walls defining first and second doorways extending therethrough, respectively, such that the doorways each lead into a respective one of the chambers of said pair, the doorways each being sized to admit a semiconductor wafer therethrough;

a gate interposed between a said pair of adjacent ones of said chambers and by which the chambers of said pair are connected at their mutually opposing gate walls, said gate constituting an open passageway along which a wafer is transferred between the chambers of said pair, and said gate defining doorways that each lead into a respective one of the chambers of said pair, the doorways each being sized to admit a semiconductor wafer therethrough; and

a gate valve disposed in said gate, said gate valve comprising a plurality of doors, and a driving unit operative, and a plurality of bars inclined relative to the vertical and connecting said doors and said driving unit, wherein said driving unit is

operative to concurrently position said doors over said doorways, respectively, and thereby establish by raising the doors via said bars that are inclined relative to the vertical, whereby a plurality of discrete seals are established between the pair of chambers connected by the gate, and wherein said driving unit is operative to angle said doors away from said gate walls and thereby uncover said doorways by lowering the doors via said bars.

Claim 2 (currently amended): The semiconductor device manufacturing equipment according to claim 1, wherein said driving unit comprises a fluid-actuated cylinder ~~connected to each of said doors that is reciprocatable in a vertical direction.~~

Claim 3 (original): The semiconductor device manufacturing equipment according to claim 1, wherein said gate adjoins said process chamber.

Claim 4 (original): The semiconductor device manufacturing equipment according to claim 1, wherein said plurality of chambers include a transfer chamber interposed between said load-lock chamber and said at least one process chamber, said transfer chamber having an internal space constituting said passageway, and comprising a robot operative to transfer a wafer along said passageway from said load-lock chamber to said at least one process chamber.

Claim 5 (original): The semiconductor device manufacturing equipment according to claim 4, wherein said gate adjoins said transfer chamber and one of said process chambers.